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Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, D.C.

In the Matter of	)	
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Implementation of Section 17 of the	)	ET Docket No. 93-7
Cable Television Consumer Protection	)	
and Competition Act of 1992	)	
	)	
Compatibility Between Cable Systems	)	
and Consumer Electronics Equipment	)	

July 21, 1993

SUPPLEMENTAL COMMENTS OF THE CABLE-CONSUMER ELECTRONICS COMPATIBILITY ADVISORY GROUP

Respectfully submitted,

CABLE-CONSUMER ELECTRONICS
COMPATIBILITY ADVISORY GROUP

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SUMMARY

This Joint Filing of representatives of the cable and consumer electronics industries is intended to provide the Commission with consultation on means of assuring compatibility between televisions and video cassette recorders and cable systems so that cable subscribers will be able to enjoy the full benefit of both the programming available on cable systems and the functions available on their televisions and video cassette recorders.

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Section 17 of the Cable Television Consumer Protection and Competition Act of 1992 ("Cable Act") requires the Commission, "in consultation with representatives of the cable industry and the consumer electronics industry," to report to the Congress "on means of assuring compatibility between televisions and video cassette recorders and cable systems, consistent with the need to prevent theft of cable service, so that cable subscribers will be able to enjoy the full benefit of both the programming available on cable systems and the functions available on their televisions and video cassette recorders." 47 U.S.C. 624A(b). On the basis of that statutory directive, and with the active encouragement of the Commission, the Cable-Consumer Electronics Compatibility Advisory Group ("Advisory Group") has been formed, which has been meeting regularly since January 1993.

The Advisory Group's purpose has been to develop joint recommendations to the Commission regarding policies and regulations to be adopted by the Commission pursuant to Section 17 of the Cable Act. Discussions of any business plans have been limited to matters of

common business knowledge that are not considered confidential. No agreements with respect to future business conduct, except insofar as may result from governmental action, have been made or offered. To the extent that existing or potential standards were (and continue to be) discussed, the intention has been that such standards be voluntary standards developed through or presented to a standard-setting organization operating under due process procedures, unless made mandatory by the Commission or some other governmental body.

The consumer electronics industry and the cable industry have been searching for solutions to the issues involved in the compatibility between cable systems and consumer electronics products for over ten years. This has first been done in the Joint Engineering Committee (JEC) of the Electronic Industries Association (EIA) and the National Cable Television Association (NCTA). And some success was obtained in those efforts. The Advisory Group has been able to make much more progress.

At the urging of Commission staff, the Advisory Group has intensified its discussions in recent weeks. As a result of those discussions, the Advisory Group is now in a position to offer joint recommendations to the Commission concerning the adoption of regulations to implement the statute. The Advisory Group understands that the Commission intends to provide an opportunity for other interested parties to comment on these recommendations. The Advisory Group welcomes this approach. Although the legislation calls for the Commission to consult only with "representatives of the cable industry and the consumer electronics industry", the Advisory Group recognizes that the development of governmental policies inevitably requires that all interested parties -- consumer groups, state and local regulatory authorities, and others -- must be allowed a full opportunity to participate. This is the best way to ensure that the Commission's determinations serve the public interest.

I. OVERVIEW

The Advisory Group's discussions have been informative and constructive. The Advisory Group now recognizes the need for governmental policies that address the legitimate

concerns of artists, cable program creators, cable system operators, electronics products manufacturers, and consumer product retailers. At the same time, it is clear that the needs and wants of consumers must be paramount.

The cable industry is a provider of programming choices made possible by the creative efforts of artists in the entertainment industry. The fruits of the labors of artists must continue to be available to cable subscribers. This places paramount importance on signal security and protection against signal theft.

As a provider of entertainment and information choices, the cable industry must be free to experiment and innovate with new services prior to the development of standards. When a new service is embraced, subscribers should be able to own and consumer electronics manufacturers should be able to supply the in-home hardware once the technology is recognized.

As compatibility issues have been discussed, it has become increasingly apparent that there is a substantial difference between what can be immediately accomplished and what can be done over a longer period of time. Working within the limitations imposed by the embedded base (both in the cable plant and in the home), the Advisory Group has identified a set of measures that can be implemented in the short-term to help address compatibility issues. The Advisory Group has also concluded that longer-term measures can bring substantial changes in the relationship between cable systems and consumer electronics products. Accordingly, governmental policies addressing compatibility issues will need to incorporate reasonable timetables; interim measures can provide relief from compatibility problems for existing TV's and VCR's and new non "cable-ready" TV's and VCR's, but more fundamental longer-term solutions are also needed.

In the short-term, appropriate hardware can be used to address the limitations associated with the deployment of set-top converters and converter/descramblers. RF bypass circuitry, descrambling converters with built-in timers, "universal" remote controls with clocks and timers, VCR's with cable box controls, and dual-descrambling converters -- buttressed by

improved consumer education -- can make it easier for consumers to enjoy advanced television picture generation and display capabilities, watch one channel while recording another, and sequentially tape programs on different channels, as the Congress intended.

Over time, more fundamental change is possible. Once a digital transmission standard is established, the industries can develop a hybrid analog/digital Decoder Interface that, coupled with receiver design changes, would allow the replacement of set-top boxes with less complicated set-back decoders. Standards for digital transmission -- and, later, digital compression and a standard security interface system -- can be developed that will reduce the need for redundant circuitry, eliminate the expense of supplemental hardware, and increase picture quality and overall reliability. These approaches can provide consumers with the ease of use and cost savings contemplated by the legislation.

These measures are discussed in greater detail below.

II. SHORT-TERM MEASURES

It is important to note that in nearly all cases, the basic service tier which includes the broadcast channels and the Public, Educational, and Governmental ("PEG") channels, will be unscrambled. Only in cases of extreme difficulty with theft of service or where franchise regulations require it, are these channels scrambled. In the case of expanded basic service, traps will be used wherever technically and economically feasible. They are a cost-effective method of signal protection for the cable industry in cases where their use is not encumbered by problems with the on-channel requirements of the "Must Carry" part of the 1992 Cable Act.

Section 17 of the Cable Act seeks to increase the ability of consumers to use the features of their TV's and VCR's, but it also recognizes that cable operators need to prevent theft of service. In earlier filings in this docket, the consumer electronics industry has advocated use of consumer-friendly anti-theft measures such as traps, interdiction, broadband descrambling, and other "In-The-Clear" approaches. The cable industry, however, has made a persuasive case that, while all of these may have their virtues -- and individual cable operators

may find them to be appropriate solutions to their particular needs -- none of them is suitable for universal deployment; each has limitations and characteristics that prevent it from reasonably being prescribed as a mandatory solution to compatibility issues. The Advisory Group recognizes that scrambling and encryption are an important part of providing cable services and will remain an essential part of delivering video signals. Yet other measures can be taken now to increase the compatibility of consumer electronics products -- including the many millions of products which have already been sold and for new non "cable-ready" TV's and VCR's -- with cable systems.

First, cable operators can sell or rent RF bypass circuitry that delivers all unscrambled signals directly to the TV or VCR, thereby allowing subscribers to access unscrambled signals in the same manner as if there was a direct connection to an antenna. This would facilitate use of advanced television picture generation and display features and allow subscribers to watch one channel while recording another, except in cases involving two scrambled channels, which is infrequently necessary. These devices may also be sold directly to subscribers at retail. Converter/descramblers incorporating this design exist now and could be deployed within approximately one year from the adoption of rules; all are remote controlled making this function remotely controllable as well.

Second, converter/descramblers with built-in timers could be deployed to facilitate sequential recording of different channels. These too, could be deployed within as little as 12 months. "Universal" remote controls with built-in timers have been available at retail for some time.

Third, for subscribers with subscriptions to two or more scrambled channels who wish to watch one scrambled channel while recording another scrambled channel or to use certain advanced display features with two scrambled channels, a second converter/descrambler -- or a single unit with two converter/descramblers -- could be provided. Availability of dual descrambler converters is likely to take approximately one year from the adoption of rules.

Fourth, the cable industry can strengthen its consumer education programs regarding compatibility options and procedures. Subscribers can be more fully informed about the options they have and how to exercise them. Assistance can be provided concerning the use of supplementary hardware, thereby ensuring that subscribers understand better how to reap maximum benefits from their cable subscriptions and from the features of their consumer electronics products.

The Advisory Group recommends that the Commission adopt regulations to require the implementation of these measures.

There are additional devices available in the competitive consumer electronics marketplace that help to address compatibility problems. For example, "universal" remotes are available that work with most, if not all, cable boxes. Some VCR's now can "force-tune" converter/descramblers. Devices that simplify control of the timing function on VCR's also can give consumers increased control of their home environments.

III. LONGER-TERM MEASURES

The Advisory Group has identified other measures that can provide more fundamental relief from compatibility problems and reduce consumer confusion. These measures include several interrelated and mutually-dependent features:

First, the term "cable-ready" needs to be defined in a way that fulfills consumer expectations. Defining this term is a specific requirement of the legislation 476 U.S.C. 624A(c)(3)(A). Any rules applicable to use of the term "cable-ready" presumably would also apply to the term "cable-compatible" or words which mean substantially the same thing. Products manufactured or sold with the term "cable-ready" must be suitable for connection to cable systems without external supplementary hardware such as converters connected between the cable system and the "cable-ready" product. Aspects of the definition must reflect:

b) The increasing channel capacity of cable systems. Better inter-industry dialogue concerning channel capacity and channel mapping will be essential so that the set which is "cable-ready" at the time it is sold remains "cable-ready" (without the need for a set-top converter) for some reasonable period of time in the future. (The surveys conducted by the Commission for rate regulation purposes may yield useful information concerning trends in channel counts.)

c) The "Decoder Interface," discussed below.

Regulation would preclude the use of the term "cable-ready" except on receivers and VCR's which comply with the front-end design specifications and incorporate the Decoder Interface or its functional equivalent as well. No regulations are needed regarding the compatibility characteristics of TV's or VCR's that are not marketed with the term "cable-ready."

Second, the Advisory Group has identified a Decoder Interface as a means of harmonizing the statutory goals of compatibility and signal security.

The Decoder Interface on the back of TV's and VCR's allows appropriate signals to exit and enter the TV or VCR for external descrambling or decryption. It also conveys other signals which are necessary for supporting cable services other subscribers enjoy through the use of a set-top box. The goal of the Decoder Interface is simply to allow access to all cable services without requiring a set-top box which is connected between the cable system and the TV or VCR.

Additional advantages of the Decoder Interface include:

Reduction in the duplication of circuits between the subscriber-owned hardware and that supplied by the cable operator

Increased video and audio quality due to a reduction in redundant processing of the signal which tends to introduce additional noise and distortion

Increased reliability

Facilitating a smooth transition towards digital television services and standards

Reduction in consumption of energy

Given the time frame necessary for product changes in consumer products and the fast-moving digital developments in cable, the Advisory Group believes the Decoder Interface specifications must include provisions for processing of digital signals. Engineers from the

Advisory Group will devise proposed specifications for a hybrid analog/digital Decoder Interface that will be submitted to the Commission in time for inclusion in the rules the Commission will issue.

To ensure the viability of "cable-ready" products as a means of curtailing compatibility problems, the Commission should (1) require that all cable companies provide the first decoder in each home for connection to Decoder Interface-equipped TV's and VCR's, at no installation charge (in contrast to the installation charge that will ordinarily apply upon installation of a converter/descrambler), (2) require that cable operators charge consumers monthly rentals for set-back decoders and set-top converter/descramblers in proportion to their costs, (3) require cable operators to provide signals in a form compatible with the Decoder Interface, and (4) preclude consumer electronics manufacturers and retailers from using the term "cable-ready" in connection with any product that does not incorporate a Decoder Interface.

Third, the other integral element of this proposed solution to compatibility issues involves standards for the digital environment. While the 1992 Cable Act does not specifically mention digital television, this technology is rapidly evolving and cooperation between the industries is essential if consumers are to have future compatibility. The Advisory Group believes it is feasible and desirable for the industries to develop -- and the Commission to then prescribe -- digital standards per the following timetable:

1993: Define "cable-ready"

1994: Define transmission and tuner specifications

No later than 1995: Set target dates for standards for decompression and a standard security interface system

The Advisory Group believes that these standards should be developed and prescribed as soon as is practical while not limiting innovation and experimentation with these rapidly evolving technologies and services.

Once digital transmission standards and other aspects of the "cable-ready" specification are completed, design cycles (normally two years) should permit the availability of "cable-ready",

decoder-interface equipped TV's and VCR's according to each manufacturer's market demand. By that time, the cable industry could be ready to provide decoders to any subscriber who wants them, with the installation fee waivers and monthly price differentials necessary to create an incentive for consumers to find this option attractive.

The Advisory Group will form a subcommittee on digital television to pursue standards. It is not expected that this subcommittee will have the resources to create new digital television standards. Rather it will investigate other standard-setting activities and research, worldwide, and seek ways to shape that research to the specific needs of compatibility as intended by The Act. Near the top of the list of efforts are a) the massive effort in the Moving Pictures Experts Group (MPEG) and b) the United States Grand Alliance on Advanced Television.

The Advisory Group urges the Commission to adopt the regulations necessary to implement these proposals.

IV. CONCLUSION

The Advisory Group has labored long and hard to develop compromise proposals that fulfill statutory requirements, serve consumer needs, and establish processes that will promote further progress in the future. The Advisory Group will continue to work with the Commission and with other interested parties to promote the expeditious adoption and implementation of the necessary regulations.

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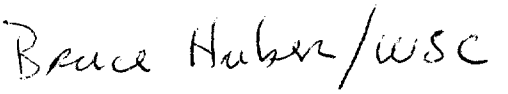

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